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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,795	08/15/2006	Karl Schermanz	16785.1	6850
22913	7590	08/09/2010	EXAMINER	
Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, UT 84111			POLYANSKY, ALEXANDER	
			ART UNIT	PAPER NUMBER
			1793	
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			08/09/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,795

**Applicant(s)**

SCHERMAN ET AL.

**Examiner**

PRITESH DARJI

**Art Unit**

1793

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, "a catalyst composition obtainable" is indefinite as to whether or not it is obtained. If instant process has "obtained" catalyst composition, then "obtainable" should be deleted and replaced with a definite synonym (e.g. obtained).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleemann (Investigation of... analysis) in view of Reddy (Surface... Techniques).

Kleemann teaches a process for preparation of a catalyst composition in which monolithic cordierite honeycomb was immersed in the suspension of  $\text{TiO}_2$  with 9%  $\text{WO}_3$ . Since there is not any other component present in the suspension, 91 wt%  $\text{TiO}_2$  is present in the suspension. It is obvious that slurry is formed because  $\text{TiO}_2$  and  $\text{WO}_3$  are

powders and their presence in the suspension would form slurry. After impregnation sample is dried and it is impregnated with  $\text{NH}_4\text{VO}_3$ . Sample is dried and calcined. See 2. Experimental, 2.1. Absence of  $\text{SiO}_2$  makes its wt% 0, therefore the limitation is met.

Kleemann does not teach that  $\text{REVO}_4$  is contacted with the  $\text{TiO}_2$  and  $\text{WO}_3$ .

Reddy teaches method of preparing 5%  $\text{V}_2\text{O}_5/\text{CeO}_2/\text{SiO}_2$  catalysts in which vanadium oxide with ammonium metavanadate ( $\text{NH}_4\text{VO}_3$ ) is dissolved in aqueous oxalic acid. Then powdered support as added. The resulting material was dried and calcined. See Experimental Section, para 2 and table 1. Calcining the resultant at 973K resulted in the formation of  $\text{CeVO}_4$ . See pg 10967, col. 1, lines 1-12. Therefore the formation of  $\text{CeVO}_4$  occurs in the process. In the process powdered support materials are added as well so they are in contact with the formed  $\text{CeVO}_4$ .

It would have been obvious for a person with ordinary skills in the art at the time of the invention to use process of Kleemann using  $\text{CeVO}_4$  and  $\text{SiO}_2/\text{V}_2\text{O}_5/\text{CeO}_2$  in view of Reddy the combination of vanadia (known for its redox properties) and ceria (known for its oxygen storage and release functions) gives rise to a catalyst system that may catalyze extraneous redox reactions for both selective and non-selective oxidation. See pg 10965, col. 1, lines 2-18. Kleemann uses ammonia metavanadate ( $\text{NH}_4\text{VO}_3$ ), which can be replaced by cerium vanadate ( $\text{CeVO}_4$ ) to yield above stated advantages.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is

patentably distinct not the examiner to show the same process of making, see In re Brown, 173 USPQ 685, In re Fessmann, 180 USPQ 324, In re Spada, 15 USPQ2d 1655, In re Fitzgerald, 205 USPQ 594 and MPEP 2113.

### ***Response to Arguments***

Applicant's arguments filed on 5/20/2010, with respect to ***Claim Objections*** and **35 USC § 112** have been fully considered and are persuasive unless stated above.

Applicant's arguments filed on 5/20/2010 have been fully considered but they are not persuasive.

Applicant argues that "obtainable according to a process" is inevitably clear that the composition is obtained according to that process because otherwise it would not be obtainable.

However the word "obtainable" yields two possibilities of either "obtaining" or "not obtaining" the catalyst composition. If instant process has "obtained" catalyst composition, then "obtainable" should be removed and replaced with clear synonym such as –obtained–.

Applicant argues that neither Kleemann nor Reddy teaches forming a slurry with a solid support and a REVO<sub>4</sub> which is then calcined. Kleemann teaches producing a monolith honeycomb that has a TiO<sub>2</sub>/WO<sub>3</sub> attached thereto as a "coating" which is a monolith; not a slurry.

However Kleemann and Reddy as a whole makes the instant invention obvious. Kleemann teaches  $\text{TiO}_2$  with 9%  $\text{WO}_3$  in the suspension used as coating material. See Kleemann, 2.1. Both  $\text{TiO}_2$  and  $\text{WO}_3$  are powder at room temperature. Their presence in the suspension makes the suspension slurry-like. Kleemann further teaches impregnation of  $\text{TiO}_2$  and  $\text{WO}_3$  with a vanadate, e.g.  $\text{NH}_4\text{VO}_3$ , followed by drying and calcining. Therefore the references have overlapping scope of subject matter with each other and with presence of vanadate and metal oxides.

Applicant has filed Declaration on 5/20/2010 under 37 CFR 1.132, which is considered but not persuasive for the following reasons:

Applicant has combined processes of Kleemann and Reddy to compare the presence of  $\text{CeVO}_4$  with that when  $\text{CeVO}_4$  was absent.

However Reddy was used to show  $\text{CeVO}_4$  is used with metal oxides like  $\text{SiO}_2$ . As mentioned in the action above, Kleemann teaches impregnation of  $\text{TiO}_2$  and  $\text{WO}_3$  with a vanadate ( $\text{NH}_4\text{VO}_3$ ) followed by drying and calcining. Therefore combining these references appears to be proper. In addition the combination of vanadia (known for its redox properties) and ceria (known for its oxygen storage and release functions) gives rise to a catalyst system that may catalyze extraneous redox reactions for both selective and non-selective oxidation.

After combining processes of Kleemann and Reddy, a support material obtained was impregnated with 4.08 g of vanadyloxalate. See declaration, pg 8, lines 5-9.

However Reddy uses ammonium metavanadate for the same purpose. Since both precursors are different, their results would be different as well.

Applicant argues that  $\text{CeVO}_4$  peak is absent in XRD spectra.

However applicant does not mention what the other peaks stand for in the XRD spectra.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRITESH DARJI whose telephone number is (571)270-5855. The examiner can normally be reached on Monday to Thursday 8:00AM EST to 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./

Examiner, Art Unit 1793

/Steven Bos/

Primary Examiner, Art Unit 1793